

Environmental Services Division Update

Subregional Technical Advisory Committee
February 9, 2023



OUR FUTURE IN EVERY DRÖP

Overview

- PFAS
- Phosphorus



PFAS- Forever Chemicals

- Manufactured chemicals that consist of fluorinated carbon chains
- Used in
 - Food containers/packaging
 - Carpets, clothing, paints, sealants
 - Electronics and coatings
 - Firefighting foams



PFAS in Wastewater

- One of the biggest issues facing wastewater treatment plants
- Found in every surface waterbody
- Found in groundwater
- Found in animals and humans
- Participating in two different studies of PFAS in wastewater



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Water Quality Order 2020-0015-DWQ

- Signed July 9th, 2020
- Required sampling for 31 separate PFAS chemicals:
 - Quarterly sampling of influent, effluent, and biosolids
 - One-time sampling of any groundwater wells in recycled water and biosolids application sites



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Influent (INF-001)

Biosolids (BIO-001)

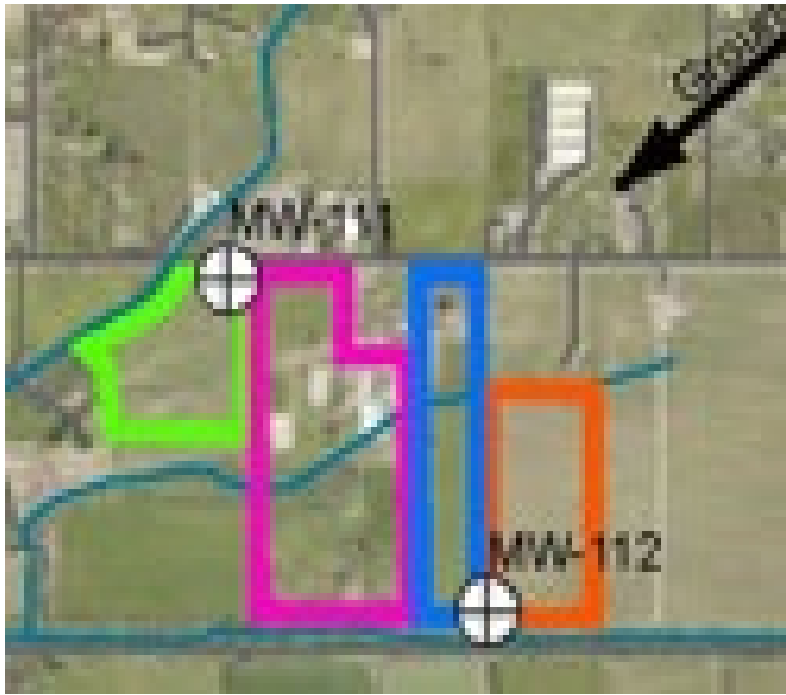
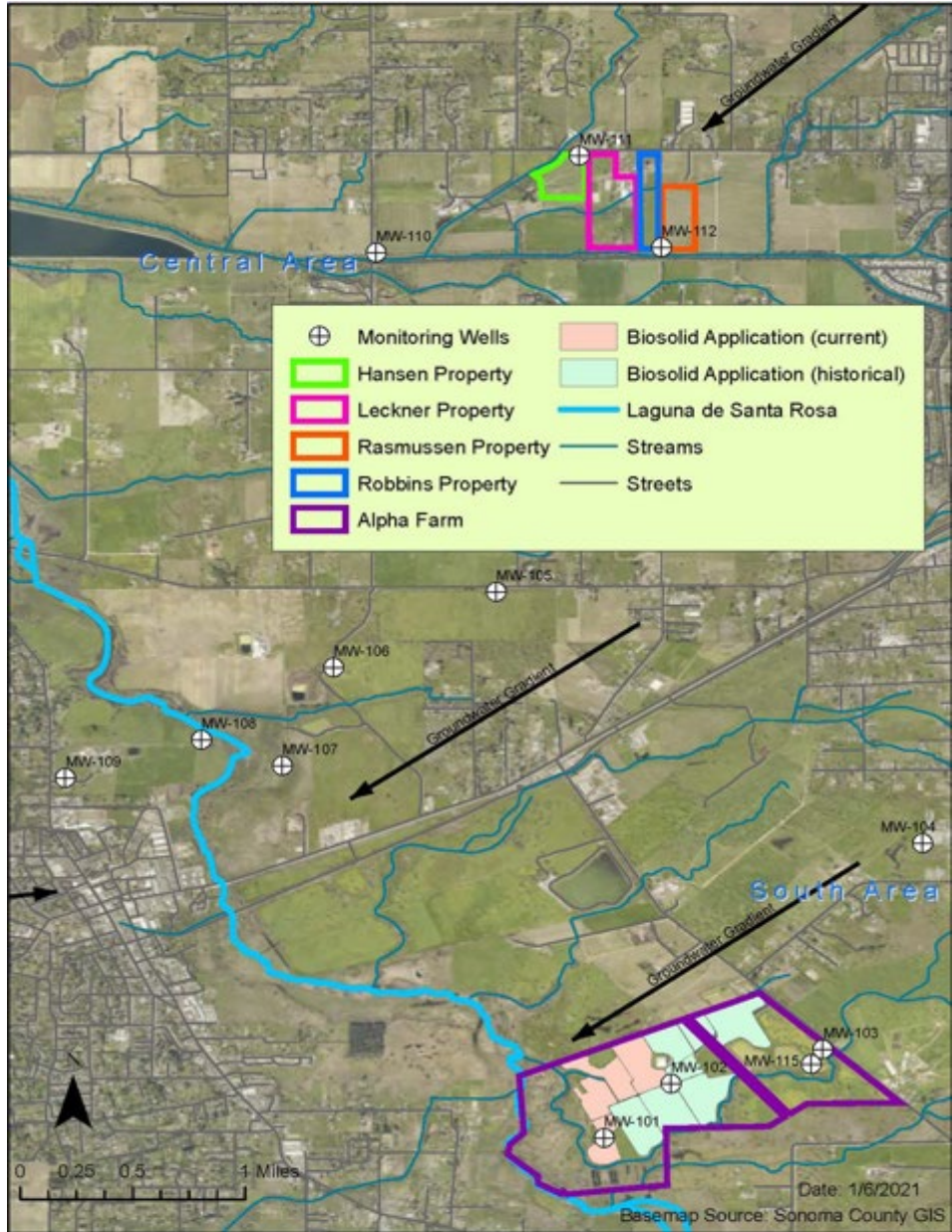
Effluent (EFF-001)

Monitoring Locations

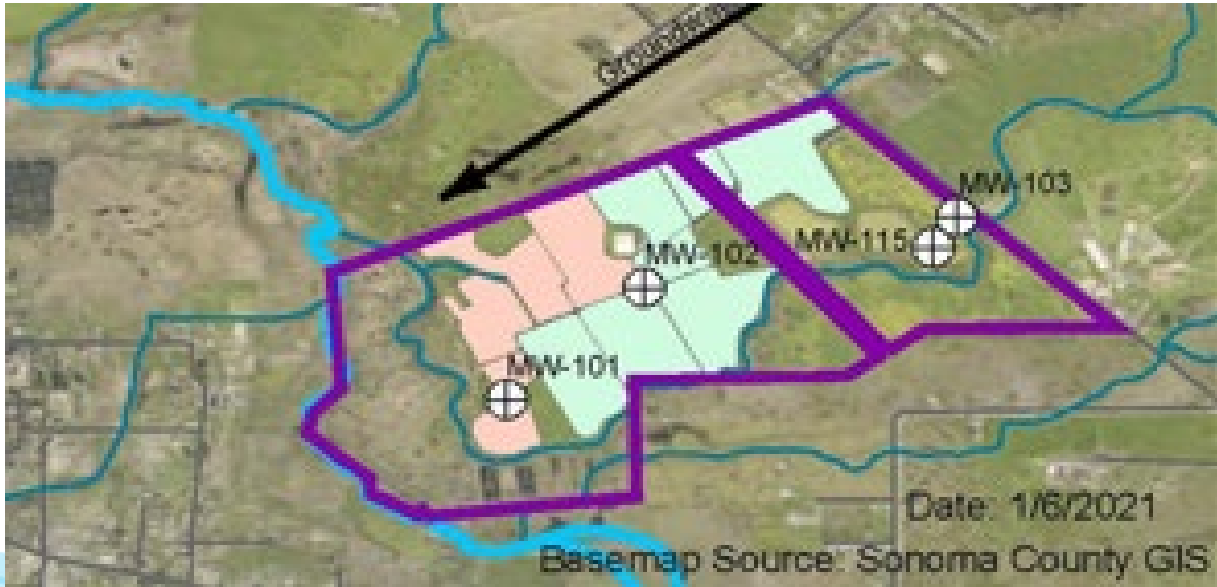
- Influent
- Effluent
- Biosolids

0 100 200 Feet





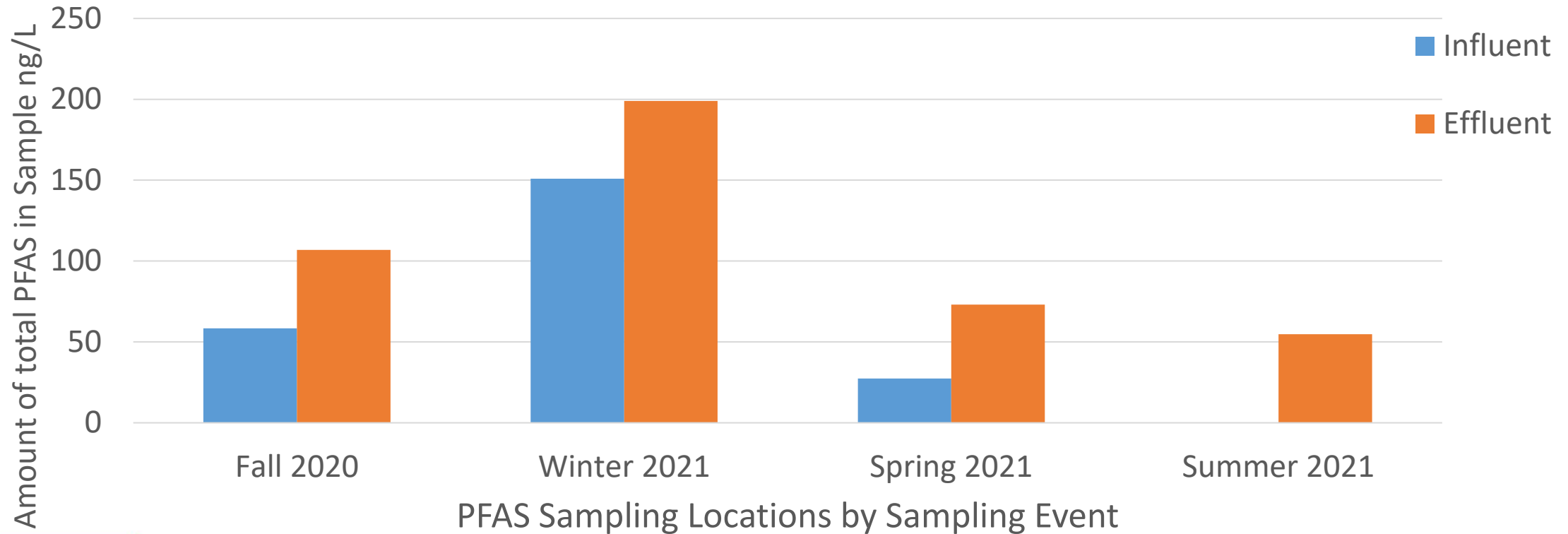
Recycled Water Irrigation Site



Biosolids Application Site

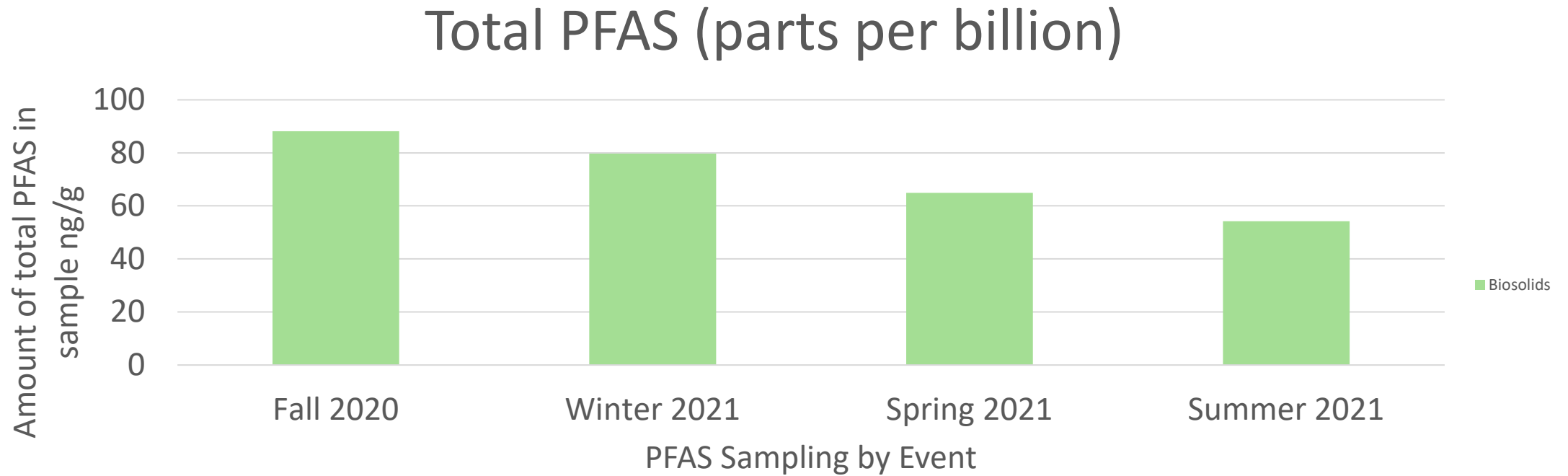
PFAS Sampling Influent and Effluent

Total PFAS (parts per trillion)



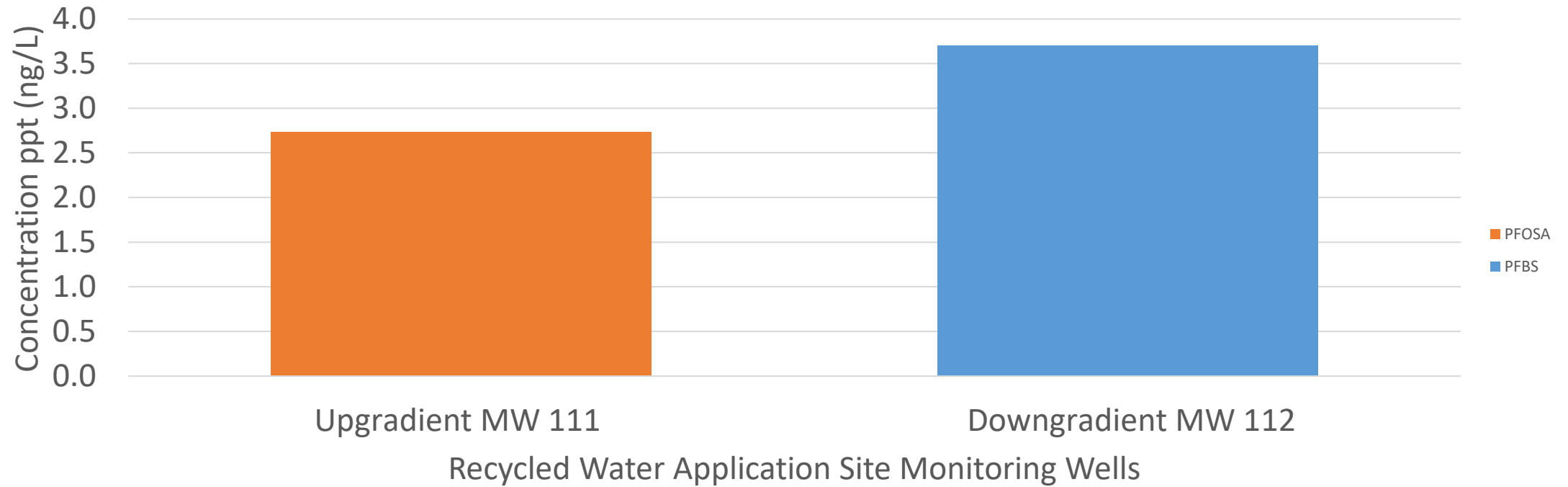
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PFAS Sampling Dewatered Biosolids



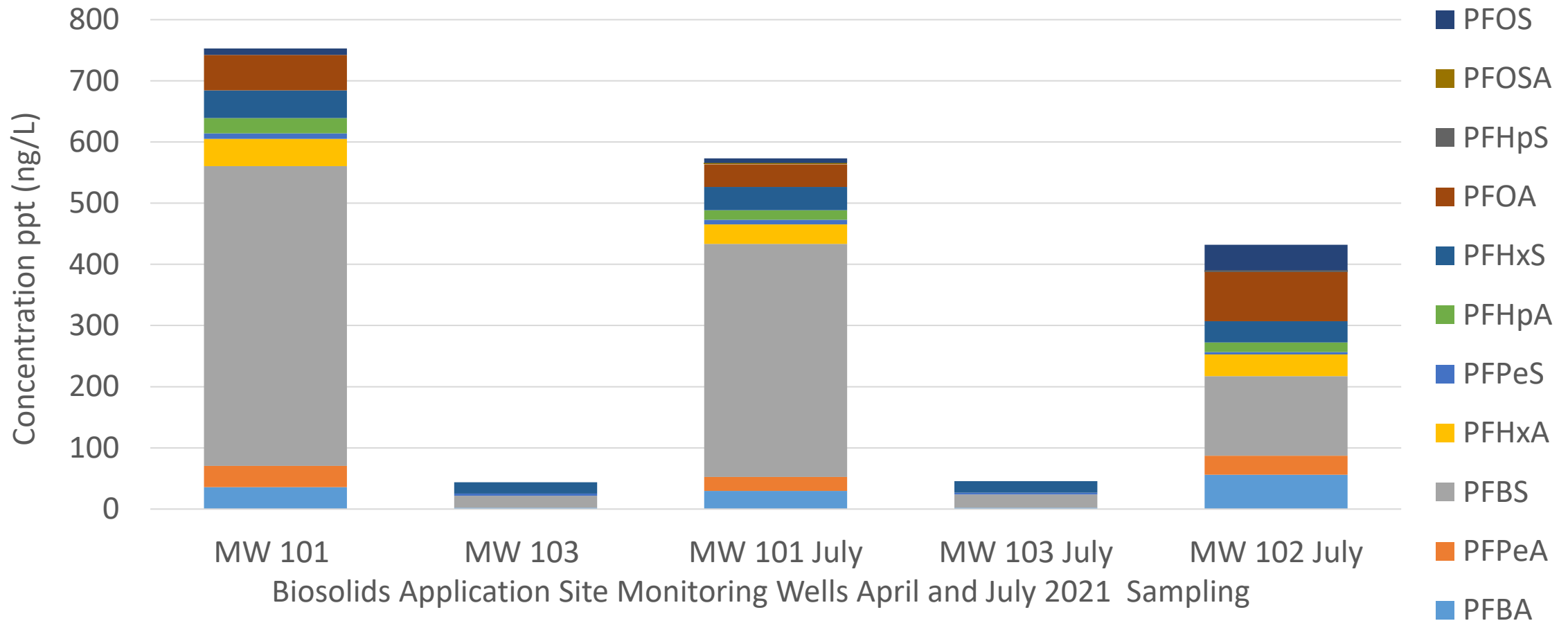
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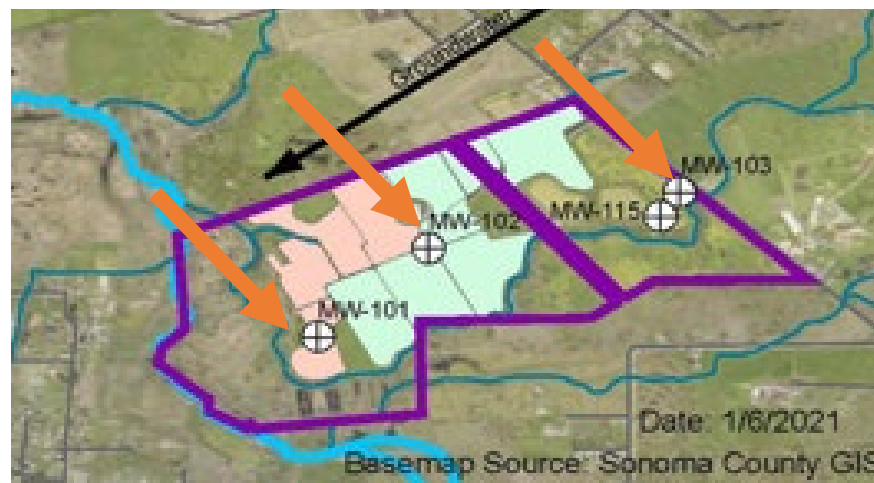
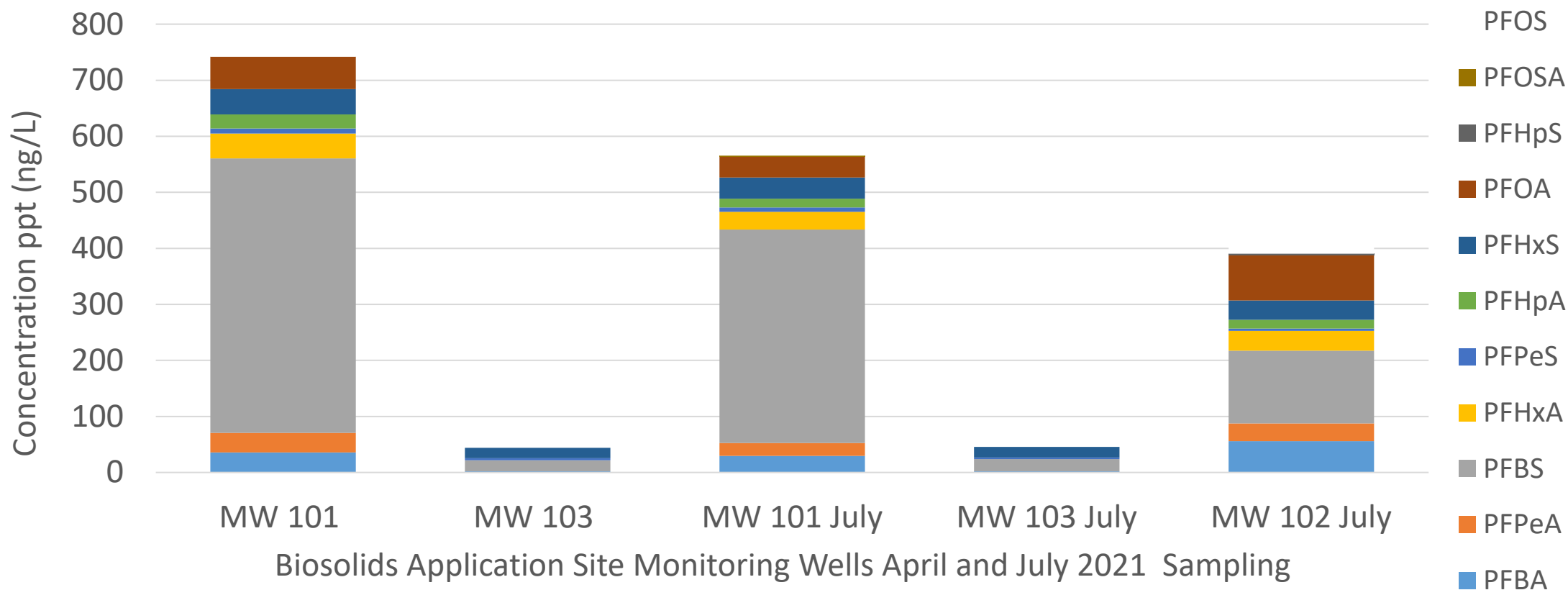
PFAS Sampling Irrigated Lands



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PFAS Sampling Biosolids Lands

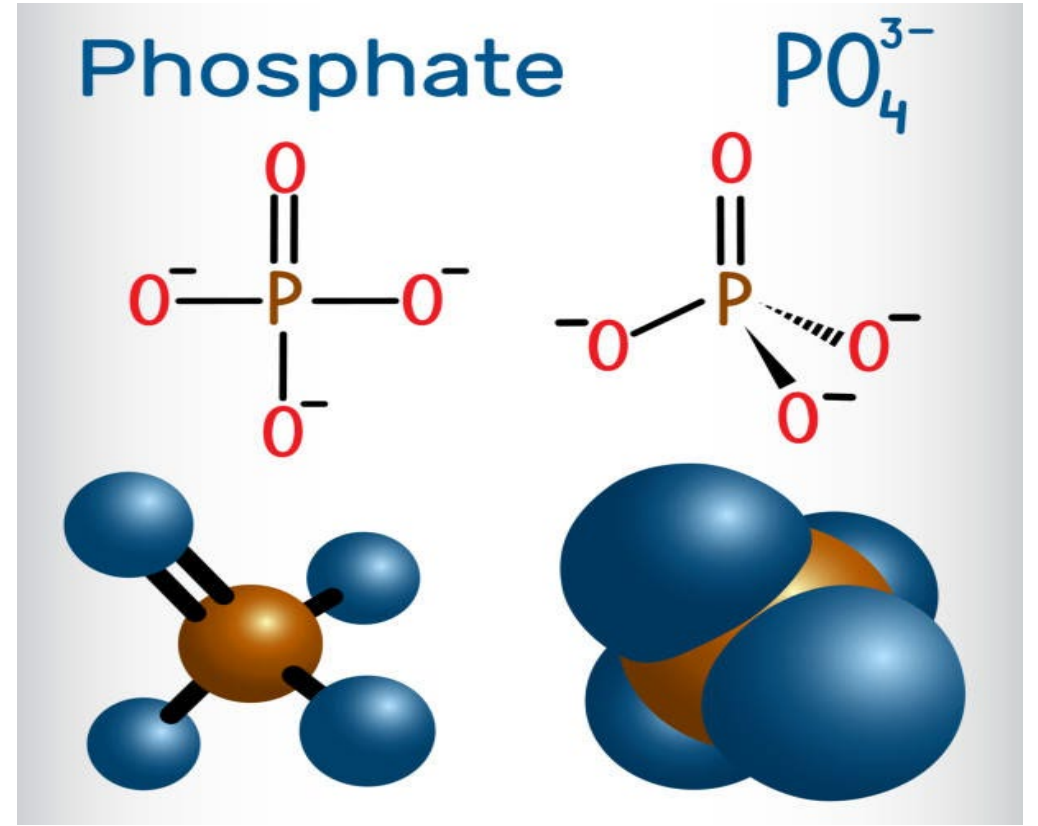
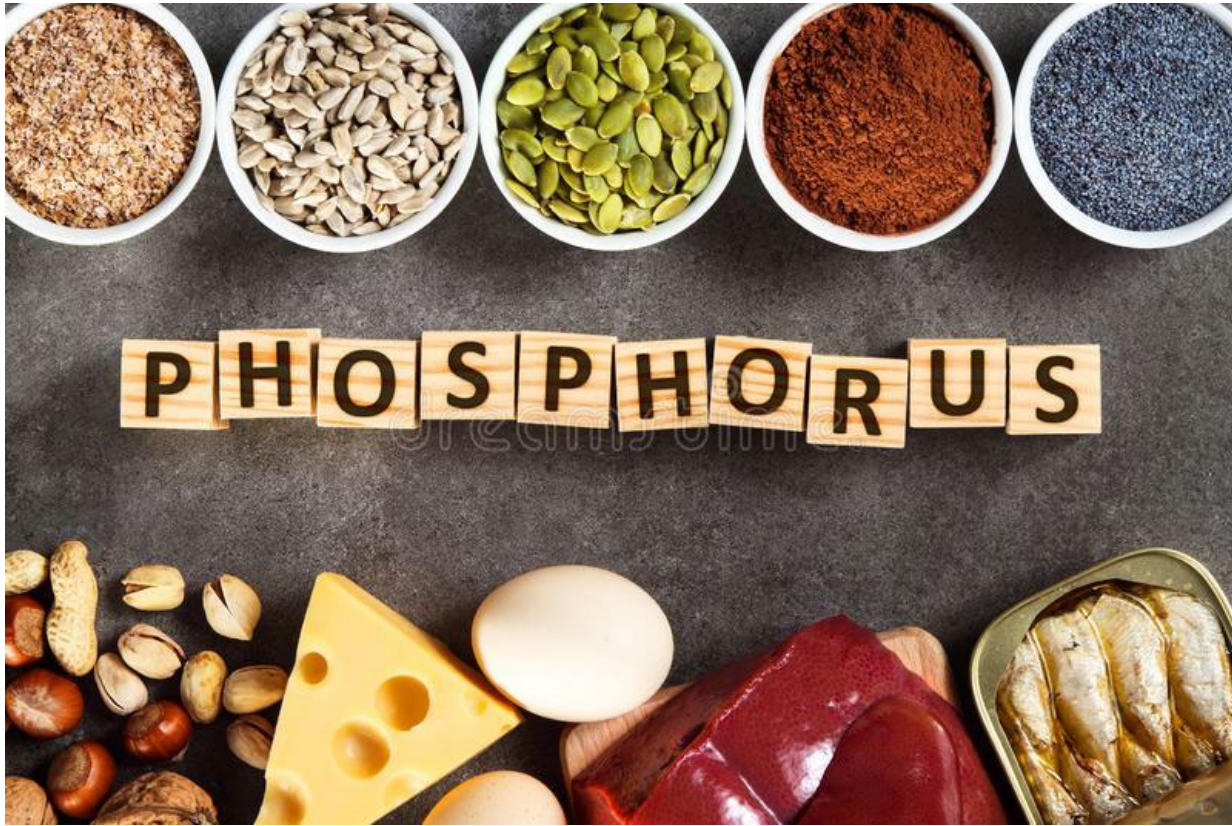




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PFAS Data Summary

- PFAS concentrations increase in winter months
- No significant trend of PFAS in irrigated lands
- Some elevated PFAS in monitoring wells in areas of biosolids land application
- Sources of PFAS in wastewater
 - Residential uses
 - Landfill leachate
 - Legacy sources?



Phosphorus Compliance

- Developed phosphorus credit tracking database
 - Currently have 13,736 credits
 - Tracks all credits developed, purchased, sold, or used to offset discharge
- Phosphorus trading agreement with the Town of Windsor
 - Option to buy or sell credits
 - Terms stipulate cost to develop credits + 20% Fee
- Working on new phosphorus removal project
 - Colgan Creek Restoration from Todd Road to Llano Road

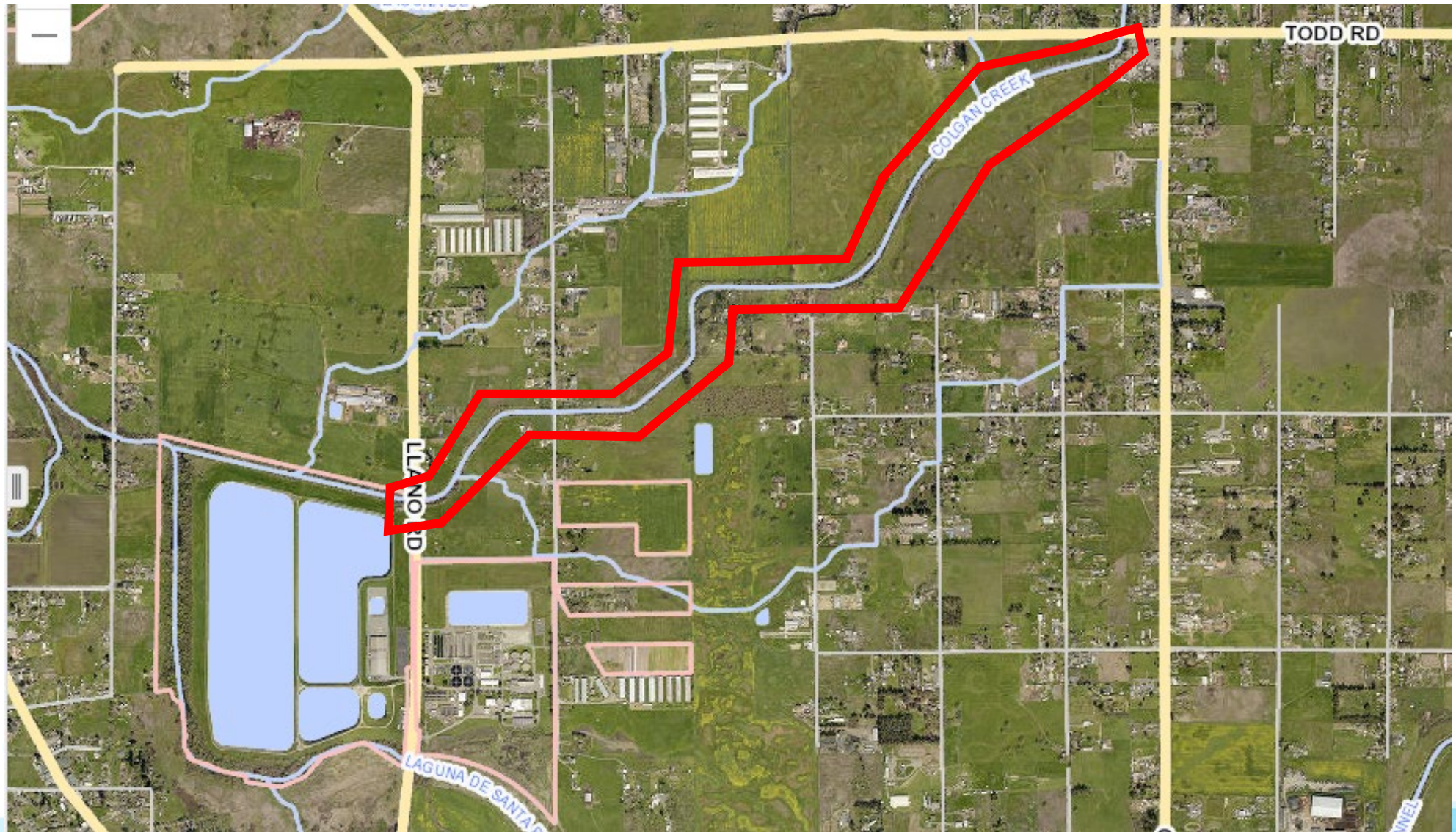


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Phosphorus Accounting

- Discharge so far this year
 - Phosphorus concentration = 2.0 mg/L
 - Amount discharged = 86.9 million gallons
 - Phosphorus mass loading = 1,449 pounds
 - Amount Windsor wishes to purchase = 500-1,000 credits

Colgan Creek Restoration Project



Questions



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